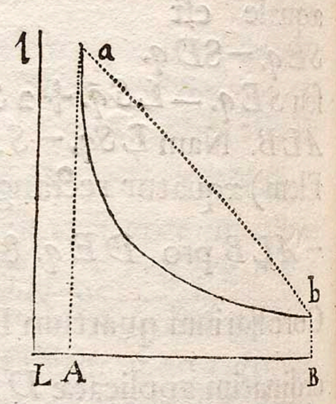
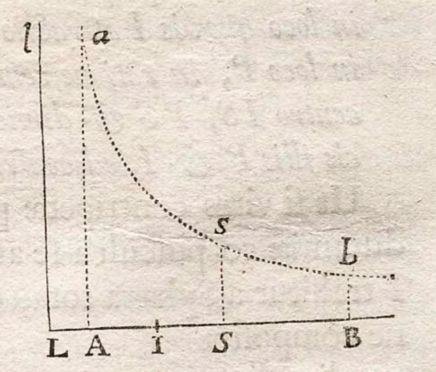
Pone DN æqualem duplo ejus $2SL - LD - \frac{ALB}{LD}$: & ordinatæ pars data $2SL$ ducta in longitudinem AB deſcribet aream rectangulam $2SL \times AB$; & pars indefinita LD ducta normaliter in eandem longitudinem per motum continuum, ea lege ut inter movendum creſcendo vel decreſcendo æquetur ſemper longitudini LD, deſcribet aream $\frac{LBq - LAq.}{2}$, id eſt, aream $SL \times AB$; quæ ſubducta de area priore $2SL \times AB$ relinquit aream $SL \times AB$. Pars autem tertia $\frac{ALB}{LD}$ ducta itidem per motum localem normaliter in eandem longitudinem, deſcribet aream Hyperbolicam; quæ ſubducta de area $SL \times AB$ relinquet aream quæſitam $ABNA$. Unde talis emergit Problematis conſtructio. Ad puncta L, A, B erige perpendicula Ll, Aa, Bb, quorum Aa ipſi LB, & Bb ipſi LA æquetur. Aſymptotis Ll, LB, per puncta a, b deſcribatur Hyperbola ab. Et acta chorda ba claudet aream aba areæ quæſitæ $ABNA$ æqualem.



Exempl. 2. Si vis centripeta ad ſingulas Sphæræ particulas tendens ſit reciproce ut cubus diſtantiæ, vel (quod perinde eſt) ut cubus ille applicatus ad planum quodvis datum; ſcribe $\frac{PE\,cub.}{2ASq.}$ pro V, dein $2PS \times LD$ pro $PEq.$; & fiet DN ut $\frac{SL \times ASq.}{PS \times LD} - \frac{ASq.}{2PS} - \frac{ALB \times ASq.}{2PS \times LDq.}$ id eſt (ob continue proportionales PS, AS, SI) ut $\frac{LSI}{LD} - \frac{1}{2}SI - \frac{ALB \times SI}{2LDq.}$. Si ducantur hujus partes

tres

tres in longitudinem AB, prima $\frac{LSI}{LD}$ generabit aream Hyperbolicam; ſecunda $\frac{1}{2}SI$ aream $\frac{1}{2}AB \times SI$; tertia $\frac{ALB \times SI}{2LDq.}$ aream $\frac{ALB \times SI}{2LA} - \frac{ALB \times SI}{2LB}$, id eſt $\frac{1}{2}AB \times SI$. De prima ſubducatur ſumma ſecundæ ac tertiæ, & manebit area quæſita $ABNA$. Unde talis emergit Problematis conſtructio. Ad puncta L, A, S, B erige perpendicula Ll, Aa, Ss, Bb, quorum Ss ipſi SI æquetur, perq; punctum s Aſymptotis Ll, LB deſcribatur Hyperbola asb occurrens perpendiculis Aa, Bb in a & b; & rectangulum $2ASI$ ſubductum de area Hyperbolica $AasbB$ relinquet aream quæſitam $ABNA$.



Exempl. 3. Si Vis centripeta, ad ſingulas Sphæræ particulas tendens, decreſcit in quadruplicata ratione diſtantiæ a particulis, ſcribe $\frac{PE^4}{2AS^3}$ pro V, dein $\sqrt{2PS \times LD}$ pro PE, & fiet DN ut $\frac{SL \times SI^{\frac{1}{2}}}{\sqrt{2} \times LD^{\frac{3}{2}}} - \frac{SI^{\frac{3}{2}}}{2\sqrt{2} \times LD^{\frac{1}{2}}} - \frac{ALB \times SI^{\frac{1}{2}}}{2\sqrt{2} \times LD^{\frac{5}{2}}}$. Cujus tres partes ductæ in longitudinem AB, producunt Areas totidem, *viz.* $\frac{\sqrt{2} \times SL \times SI^{\frac{1}{2}}}{LA^{\frac{1}{2}}} - \frac{\sqrt{2} \times SL \times SI^{\frac{1}{2}}}{LB^{\frac{1}{2}}}$, $\frac{LB^{\frac{1}{2}} \times SI^{\frac{3}{2}} - LA^{\frac{1}{2}} \times SI^{\frac{3}{2}}}{\sqrt{2}}$ & $\frac{ALB \times SI^{\frac{1}{2}}}{3\sqrt{2} \times LA^{\frac{3}{2}}} - \frac{ALB \times SI^{\frac{1}{2}}}{3\sqrt{2} \times LB^{\frac{3}{2}}}$. Et hæ poſt debitam reductionem, ſubductis poſterioribus de priori, evadunt $\frac{8SI\,cub.}{3LI}$. Igitur vis tota, qua corpuſculum P in Sphæræ centrum trahitur, eſt ut $\frac{SI\,cub.}{PI}$, id eſt reciproce ut $PS\,cub. \times PI$. Q. E. I.

Ea-